ANALYSIS OF THE CONTAINMENT BUILDING RULE CHANGE

The following discussion summarizes the analysis of the "Containment Building Rule Change" published in the *Federal Register* (Vol 57, No.160), on Tuesday, August 18, 1992.

Page 37214, Section c, of the Federal Register states:

> . . . The [containment] unit is to be designed to prevent exposure to precipitation and wind . . . to distinguish these units from piles—i.e., land disposal units—hazardous wastes managed in these units must be fully contained within the unit. As such, the unit must be completely enclosed with a floor, walls, and a roof to prevent exposure to precipitation and wind. . . . Although a number of commenters to the proposed rule did not believe complete enclosure to be necessary, EPA continues to regard this as key to ensuring complete containment of the wastes managed in these units, and thus distinguishing these units from land disposal units such as piles.

Also, in accordance with Subsection 1 on page 37214:

> . . . The floor, walls, and roof of the [proposed containment] unit must be constructed of man-made materials with sufficient strength to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit. Fragile barriers that would not withstand repeated contact with the handling equipment used within the unit thus are not suitable, and units designed with such ineffective barriers would not be containment buildings. Operating events such as deliberate or accidental placement of materials against containment walls must be taken into account in designing and constructing the unit. . . .

Further, in accordance with page 37213, Section c of the same article:

> . . . This includes a requirement of obtaining certification by a professional engineer that the unit is designed and constructed to meet the requirements for containment buildings and must maintain such certification at the facility [§ 262.34(a)(1)(iv)]. . . . Generators planning to convert to or install containment buildings in advance of the effective date for these requirements are required to place certifications for these units in the facility's operating record no later than 60 days from the date of initial operation of the unit as a containment building. After February 18, 1993, PE certification is required prior to operation of the unit.

In addition, page 37217, Subsection ix expands upon the PE certification requirements as follows:

> . . . a professional engineer must certify that the containment building has been designed with sufficient structural integrity and is acceptable for storing and treating hazardous waste according to the standards specified by EPA. The assessment must show that the foundation, structural support, primary barrier, secondary containment system (where required), fugitive dust control system, and leak detection system are designed to meet today's standards and that the containment building has sufficient structural strength and compatibility with the waste to be stored or treated. [See §264.1101(c)(2) and §265.1101(c)(2).]

From the facility description provided[2], it appears that the side and end walls of the proposed membrane roofed enclosure do not reach the ground If this is true, the requirement for complete enclosure against wind is not satisfied. Further, the side walls are apparently sloped, which will allow precipitation to reach the unit floor at the exposed wall "arches." Ponding could take place or dust and particulate could be transported to the ground around an undiked floor slab. If dikes were installed around the perimeter of the facility, any water accumulated in the diked area would have to be analyzed for contamination before disposal.

Although the proposed pondcrete blocks are to be enclosed in half-crate packaging, care must be taken to ensure that dust and particulate matter does not escape the half-crate. It is likely that EPA will consider any such dust to be contaminated. The fabric-covered enclosure does not adequately ensure against the potential release of the dust and particles, and therefore would appear to be unacceptable.

No indication is given that provisions have been made to protect against side wall impact by the blocks or handling equipment. In the event of impact, and subsequent membrane rupture, additional exposure to precipitation and wind would be of concern.

In addition to the above, EPA is requiring inspection plans as defined on page 37217, Subsection viii of the same issue of the *Federal Register*:

> . . . EPA is requiring an inspection schedule for these units whereby, at least every seven days, monitoring/leak detection equipment, the containment building, and the area surrounding the containment building is checked to ensure the unit is being properly operated and that no leaks/releases have occurred to the air, ground, or water [See §264.1101(c)(4) and §265.1101(c)(4)]. This is consistent with the existing inspection requirements for drip pads and for liner and leak detection systems. These observations must be recorded in the facility's operating record. . .

Therefore, it is imperative that allowances be made to provide for the appropriate level of inspection.

REFERENCES

1. *Federal Register*, Tuesday, August 18, 1992
Volume 57, Number 160, Pages 37194-37218
Part II, Environmental Protection Agency
40 CFR Part 148, et al
Land Disposal Restrictions for Newly Listed Waste and Hazardous Debris;
Rule

2. *Assembly Manual, Fast Structures, 100 Ft "B"*
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Los Angeles, CA 90040
213-723-8311
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